IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant:	Ole SIBBESEN, et al.	Examiner:	Raghu, Ganapathiram
Serial No.:	10/626,583	Art Unit:	1652
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For:	PROTEINS		

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DECLARATION OF JENS FRISBAEK SORENSEN UNDER 37 C.F.R. §1.132

I, Jens Frisbaek Sorensen, declare:

1. I am a co-inventor of the subject matter described and claimed in the above-captioned patent application.

2. I have reviewed the Office Action mailed July 31, 2008 ("Office Action"), the Advisory Action mailed October 20, 2008 ("Advisory Action"), the Examiner's Answer to the Appeal Brief mailed August 17, 2009 ("Examiner's Answer"), the Board of Appeals Decision mailed February 3, 2011 ("Decision"), and the references cited within those documents.

3. The claimed invention relates to a bakery product or dough for making a bakery product that includes a polypeptide expressed from the nucleotide sequence of SEQ ID NO: 6. A dough for making a bakery product is typically developed at a temperature within the temperature range [20-40 degree Celsius]. Consequently, the high thermostability of the *B. circulans* xylanase in Campbell would not provide motivation for incorporating these in a bakery product or dough for making a bakery product. On the contrary, they would not be efficient at the temperature for dough making and they might not be inactivated during the baking process, which is required due to regulatory approval.

4. Stickiness is undesirable characteristic of dough because it adversely affects handling and production. As stated in the Specification, at the time of invention, it was thought that bacterial xylanases would produce very sticky dough. This is supported by Maat, et al., "Xylanases and their application in bakery," in "Xylans and Xylanases, edited by J. Visser, et al., pages 349-360 (1992), which states that bacterial xylanases can produce a sticky dough. Based on this belief, bacterial xylanases were not generally used in dough for making bakery products.

5. I performed or supervised experiments to determine what effects the bacterial xylanase expressed from the nucleotide sequence of SEQ ID NO: 6 ("BX xylanase") would have on dough. See Specification, Examples 1 and 2. In a first experiment, the BX xylanase was compared with another bacterial xylanase ("Röhm xylanase"), which differs from the BX xylanase by only a few amino acids. See Specification, pages 48-49. As predicted, the Röhm xylanase gave rise to dough stickiness compared to control dough. See Specification, Table 4. Surprisingly, the BX xylanase produced dough that was less sticky than the control dough. *Id.* This was unexpected because the BX xylanase, a bacterial xylanase, was expected to produce very sticky dough.

6. In a second experiment, the BX xylanase was compared with two fungal xylanases ("X1 xylanase" and "Novo xylanase"). See Specification, page 47, line 13 – page, 48, line 13. While the X1 and Novo xylanases gave rise to dough stickiness, the BX xylanase decreased the stickiness of the dough compared to the control. See Specification, page 47, lines 10-14 and Table 2. The BX xylanase result was unexpected because a bacterial xylanase was expected to produce sticky dough. However, it was even more surprising that the BX enzyme gave less stickiness of the dough compared to a fungal xylanase. Fungal xylanases are known to increase the specific volume of breads without giving significant rise to dough stickiness, which is why fungal xylanases have typically been used in baking. See Specification, page 2, lines 27-33.

7. In the Examiner's Answer, the Examiner states that the above results could be explained by differences in the purity of the xylanases. See Examiner's Answer, page 16. I disagree. The purity of the xylanase enzymes used in Examples 1 and 2 were purified samples with a purity of >90% as demonstrated by HPLC chromatograms. Without being bound by any theory, I do not believe the results obtained in Examples 1 and 2 of the Specification were based on the purity of the xylanase enzymes.

8. All statements made herein of my knowledge are true and all statements made on information and belief are believed to be true; and further these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patents issued thereon.

Attorney's Docket No.: 14923.0104

Date: 2011.03.28

Jens Frisbaek Sorensen